

EXHIBIT 20

DECLARATION OF BERNARD ARULANANDAM

I, Bernard Arulanandam, declare as follows:

1. I am the Vice Provost for Research at the Trustees of Tufts College (“Tufts University” or “Tufts”) in Boston, Massachusetts.

2. I have held that position since July 2022. Before that, I oversaw research, economic development and knowledge enterprise work within the University of Texas System, at the University of Texas San Antonio. As a federally funded researcher for over 25 years, I can attest to the crucial role of indirect funds in supporting the infrastructure and systems at universities, which go beyond the direct costs associated with research itself.

3. As the Vice Provost for Research, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Tufts University personnel and could testify thereto.

4. Tufts University receives substantial annual funding from the Department of Energy (DOE), with 29 active DOE-funded projects as of April 13, 2025. These active projects represent a total awarded amount of \$23.7 million, comprising \$17.6 million in direct costs and \$6.1 million in indirect costs. In connection with the 29 active awards, the DOE has \$7.7 million in outstanding funding obligations to Tufts, including \$6 million in direct costs and \$1.7 million in indirect costs, calculated based on Tufts’ federally negotiated indirect cost rate of 58% for its Medford/Somerville, MA campus, which was established on December 16, 2022.

5. Tufts University unites the resources and expertise of its Schools of Engineering, Arts and Sciences, and the Tisch College of Civic Life to support the national mission of the Department of Energy. These nationally recognized research entities rely on federal support to advance vital, cutting-edge research that benefits millions of Americans. For example:

- a. Tufts University leads a dynamic range of research efforts spanning materials science, quantum computing, and resilient infrastructure, emphasizing innovation from the molecular to the macro scale. From atomically precise catalyst development and nanostructured membranes for energy applications to pioneering roles in quantum systems like the Quantum Systems Accelerator, Tufts is advancing both fundamental science and real-world technologies. The university also integrates artificial intelligence into uncertainty modeling and supports energy initiatives that enable American energy independence.
 - b. In the realm of quantum science and computing, Tufts is actively engaged in Quantum research, including the Quantum Systems Accelerator and the QSCOUT open user testbed, contributing to next-generation computing capabilities. Research in topological insulators, superconductors, and the modeling of quantum systems also contributes to the U.S. position at the forefront of quantum device information, a line of research supporting national security and defense. Tufts' work on exascale simulations for hybrid rocket motors, applying quantum principles and high-performance computing, supports both fundamental science and applied engineering challenges.
6. Indirect costs are essential for supporting this research. The DOE's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects and programs described in paragraph 5.
7. Indirect costs are leveraged to construct and maintain state-of-the-art facilities required to meet the current technical requirements for advanced research, as well as the

procurement of equipment necessary to conduct basic and applied research. Without this equipment, we cannot conduct the research.

8. For example, with respect to the areas of research described in Paragraph 5 and the infrastructure described in Paragraph 7:

- a. Tufts University hosts a robust and interdisciplinary infrastructure for energy research, spanning multiple departments and cutting-edge laboratories. The Renewable Energy and Applied Photonics (REAP) Labs in Electrical and Computer Engineering lead advancements in thermophotovoltaics, nanophotonics, and waste heat harvesting.
- b. The Green Energy and Novel Electrolytes (GENE) Lab focuses on developing innovative electrolytes for efficient energy storage, while researchers in Chemical and Biological Engineering designs next-generation electrochemical systems.
- c. In Civil and Environmental Engineering, research addresses energy systems in the context of energy resilience. Additional labs such as the Smart Polymers, Membranes, and Separations Laboratory and the Eagan Sustainable Catalysis Laboratory further enhance Tufts' leadership in advanced materials for energy innovation.
- d. Each of these laboratories support the DOE's agenda to unleash American energy at home and abroad to restore U.S. energy dominance.

9. If indirect costs were cut on federally funded energy research, several tangible impacts could occur across Tufts University, laboratories, and research infrastructure. Key consequences include underutilized or abandoned laboratories and facilities, delayed or canceled infrastructure upgrades, and the loss of collaborative spaces essential for research, education and

training. More concerning, cuts to indirect support could reduce equipment maintenance capabilities, potentially leading to safety risks in high-tech or hazardous research environments.

10. In addition, indirect costs fund the administration and oversight of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as DOE. Cutting indirect cost support presents several compliance risks that could impact the integrity, sustainability, and legality of research programs. These mandates serve many important functions, including ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property or technology theft or mismanagement, or preventing national security expertise from being inappropriately accessed by foreign adversaries; and providing the high-level cybersecurity, data storage, and computing environments mandated for regulated data.

11. Tufts University's recovery of indirect costs is governed by predetermined rates that are contractually negotiated with the federal government. For fiscal year 2025, these rates are set at 58% for schools on the Medford/Somerville campus and 65% for the health sciences campuses. Any reduction to these rates—such as a shift to a 15% indirect cost rate, which is inconsistent with Tufts' federally negotiated agreement—would significantly reduce the university's anticipated indirect cost recovery and have a lasting negative impact on the strength and sustainability of our research enterprise.

12. This reduction will have deeply damaging effects on Tufts' ability to conduct research from day one. Most critically, it will necessarily and immediately result in staffing reductions in both research laboratories and research administration. For example: Tufts University's Institutional Review Board (IRB) is responsible for the oversight of all research involving human subjects, ensuring both ethical standards and the protection of participants'

privacy. Without sufficient support through indirect cost recovery, the University may be forced to reduce IRB staffing. Such reductions would have an immediate effect on the IRB's capacity to review and approve research protocols in a timely manner, resulting in significant delays to critical research—potentially including DOE-funded projects involving human subjects.

13. Tufts University has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. Tufts University carries long-term institutional commitments—such as support for tenured faculty, laboratory and technical staff, equipment, and facility maintenance contracts—that represent fixed, non-negotiable costs. Tufts University relies on budgeted grant funding, including indirect cost recovery, to meet these obligations and sustain its research infrastructure.

14. In addition to the immediate impacts and reliance interests described above, there are longer-term impacts that are both cumulative and cascading. Critical safety functions are often among the first areas impacted when faced with fiscal constraints, leading to significant risks. Reductions in indirect costs can compromise environmental health and safety staffing, delay mandatory inspections, limit access to proper training for laboratory personnel, and hinder maintenance of essential safety equipment such as fume hoods, chemical safety infrastructure, and emergency response systems. These cuts not only endanger the health and well-being of researchers, staff, and students, but also increase the risk of regulatory noncompliance, accidents,

and hazardous material exposure—threatening both the continuity and credibility of the institution’s research enterprise.

15. According to the Tufts University 2024 Economic and Community Impact Report, Tufts generated \$112.1 million in tax revenue and supported 12,904 jobs in New England in 2023. Disruptions to Tufts University’s research funding, such as an indirect cost rate reduction to 15%, would directly result in reduced tax revenue and employment opportunities at the local and state level, with downstream impacts on the number of scientists and engineers that are trained and deployed into the U.S. innovation ecosystem.

16. Finally, slowdowns or halts in research by Tufts University and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation’s national and energy security and its economic dominance.

17. Tufts cannot cover the funding gap itself. While Tufts maintains an endowment, it is neither feasible nor sustainable for Tufts to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

- a. Much of the University’s endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Tufts is not legally permitted to use those funds to cover research infrastructure costs.
- b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout to ensure long-term financial stability for the institution.
- c. As a non-profit institution, Tufts reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In

other words, unlike for-profit organizations, Tufts does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

- d. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Tufts University—which would in turn force reductions in key investments supporting Tufts’ faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain Tufts’ academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 13, 2025, at 75 Kneeland Street, Boston, Massachusetts.



Bernard Arulanandam
Vice Provost for Research
Tufts University